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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/555,701	08/10/2000	OLAF JOERESSEN	367.38587X00	9004

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ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-9889

EXAMINER	
PHAN, MAN U	

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/555,701	JOERESSEN, OLAF	
	Examiner	Art Unit	
	Man Phan	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 September 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26,33 and 34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,21-26,33 and 34* is/are rejected.

7)☒ Claim(s) *17-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 August 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment and Argument

1. This communication is in response to applicant's 09/20/2004 Amendment in the application of Olaf for an " INTEGRATING COMMUNICATIONS NETWORKS" filed 08/10/2000. This application is a national stage entry of PCT/IB98/02032 International Filing Date: 12/03/1998. This application claims foreign priority based on the application 9725659.8 filed December 03, 1997 in UNITED KINGDOM. Receipt is acknowledged of papers submitted under 35 U.S.C 119(a) – (d), which papers have been placed of record in the file. The proposed amendment to the claims and response have been entered and made of record. Claims 27-29 have been canceled per applicant's request, and new claims 33, 34 have been added. Claims 1-26, 33, 34 are pending in the present application.

In view of applicant's amendment to amend the specification to obviate the objection, examiner has withdrawn the Objections of record.

In view of applicant's response with respect to the rejection under 35 USC 112, the examiner has withdrawn the rejection of record.

2. Applicant's amendment and argument to the rejected claims are insufficient to distinguish the claimed invention from the cited prior arts or overcome the rejection of said claims under 35 U.S.C. 103 as discussed below. Applicant's argument with respect to the pending claims have been fully considered, but they are not persuasive for at least the following reasons.

3. In response to Applicant's argument that there is no suggestion to combine the references, i.e., Haartsen as proposed in the office action. The Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). It must be recognized that any judgement on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. *In re McLaughlin*, 443, F.2d 1392; 170 USPQ 209 (CCPA 1971).

4. Applicant's argument with respect to the rejected claims 1, 33, 34 (page 13, first paragraphs) that the cited references do not disclose the "simultaneously operating in a first mobile radio communications network and a second different radio communications network". However, Haartsen (US#5,870,673) discloses Mobile handover between a private radio communications network connected to the public switch telephone network and a public land mobile network also connected to the public switch telephone network are provided by a radio communications mobile terminal supporting simultaneous communication connections between the two uncoordinated networks. Haartsen's system and method solve the problem of receiving

calls *from both a wide area cellular network and a private radio communications network,* which provides a mobile terminal for receiving incoming calls, either voice or message, *both in the wide area cellular network and the private radio communications network* (Col. 3, lines 60 plus). Accordingly, the dual page monitor operations of Haartsen address the problem of receiving incoming calls on both a wide area cellular network and a private radio communications network by providing mobile terminals and methods for using the same which periodically wakes to monitor for paging messages/beacon transmissions from the respective networks. The mobile terminal is thereby able to receive calls from the private radio communications network while concurrently monitoring the wide area cellular network to receive paging messages indicating incoming unforwarded voice calls or incoming messages (*simultaneously operating in a first mobile radio communications network and a second different radio communications network*). The mobile terminal may either maintain registration with both systems and execute dual monitor operations at all times or forward voice calls from the wide area cellular network and use dual monitor only to receive messages on the wide area cellular network or, finally, may entirely deregister from the wide area cellular network when it is connected to a private radio communications network and only periodically enter a dual monitor mode to receive messages or unforwarded calls (Col. 5, lines 64 plus). It's noted that Interworking requirements for fixed and cellular telephone equipment have been developed to provide uniform service, including a uniform numbering plan and compatible call setup procedures. The North American cellular industry has developed the RS-553, IS-54, and IS-41 specifications for switching systems to allow cellular telephones to roam between cellular switch systems, providing authentication, location tracking, call routing and setup, and handoff between

cellular switch systems. Similar specifications have been developed for other cellular systems including European GSM. The cellular switch system typically includes equipment for interconnecting to the switched telephone network, a network of geographically separated circuit basestations, circuit-switching equipment for connecting the telephone network to the basestations, circuit control equipment, and other equipment over radio links, where a call is established between a mobile end system and a basestation. Such a cellular telephone system is described in the Bell System Technical Journal, January 1979, entitled, "The Cellular Concept," page 15, et seq. Therefore, the Examiner maintains that the references cited and applied in the last office actions for the rejection of the claims are maintained in this office action.

Claim Rejections - 35 USC ' 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-26, 33, 34 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Haartsen (US#5,870,673) in view of Haartsen (US#6,590,928).

With respect to claims 1 and 33, 34, Haartsen disclose a novel method and system for the connection of mobile device between different communications networks, according to the

essential features of the claims. Haartsen '673 discloses a terminal for simultaneously operating in a wide area cellular network meeting the limitation of a first mobile radio communications network, and a private radio communications network meeting the limitation of a second different radio communication network (col. 5, lines 9-19). Haartsen '673 also discloses transceiver means for transmitting and receiving in said mobile communications network and transceiver means for transmitting and receiving in the second radio communications network (col. 1 1, lines 16-21). Haartsen '673 also discloses that transmissions in the wide area cellular network occur in a first predetermined period of time, and transmissions in the private radio communications network occur in a second predetermined period of time (col. 1 1, lines 22-36). This meets the limitation of a period of time between transmissions on the first mobile communications network. Haartsen '673 discloses that the private radio network may be a TDMA network that uses designated time slots at a designated frequency.

However, Haartsen '673 fails to expressly disclose transmitting and/or receiving an integer number of packets sequentially in the period of time. In the same field of endeavor, Haartsen '928 discloses an ad hoc piconet wireless LAN wherein a temporary master unit is identified (col. 11, lines 24-36). The master unit controls the connection between two slave units, which must listen to the master during a slave receive slot and respond in a slave transmit (Tm slot (col. 12, lines 32-3%. The WLAN uses TDD frames that consist of a transmit slot and a receive slot, and each slot can contain only one packet (col. 12, lines 50-55). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to implement the WLAN of Hamsen '928 as the private radio network of Haartsen '673 wherein the mobile terminal may be temporarily acting as the master unit. At the time the invention was

made, it also would have been obvious to a person of ordinary skill in the art to transmit only whole TDD frames, thus an integer number of packets, of Haartsen :928 during the period of time of Haartsen '673. One of ordinary skill in the art would have been motivated to use the Haartsen '928 network to provide an efficient way of time slot allocation in the invention of Haartsen '673. One of ordinary skill in the art would have been motivated to only transmit whole TDD frames during the period of time so that no data would be lost or corrupted.

Regarding claims 2 and 3, the '928 reference discloses that the master controls the connections in the piconet, and that a polling pattern is used to schedule the transmissions of the slave units (col. 12, lines 32-35). This meets the limitations of defining allocation patterns for transmission of packets in the second radio communications network.

Regarding claim 4, the '928 reference discloses that the TDD frames consist of a TX and a RX slot. All slaves listen during the RX slot, but only the slave that is addressed in the RX slot may transmit in the succeeding TX slot (col. 12, lines 35-39). This meets the limitation of an allocation pattern that controls at what time transceiver units have access to the network whether transmission or reception access, and the duration of access.

Regarding claims 5 and 6, the '673 reference discloses that the structure of the multiframes of the wide area cellular network and private network are such to reduce or eliminate the potential for consecutive conflicting transmissions (col. 10, lines 1 8-26).

Regarding claim 7, the '673 reference discloses a selector circuit (60) for selecting either the cellular circuit, or private network circuit when the first predetermined time interval and the second predetermined time interval conflict (col. 12, lines 22-27). Thus, the terminal may only communicate over one network at a time.

Regarding claim 8, as described above, the '673 reference discloses that the mobile terminal communicates over the private radio network during the second predetermined period of time, which is in between successive first predetermined periods of time for communicating over the wide area cellular network. These periods of time repeat cyclically. Also, as described above, the '928 reference discloses the scheduling of transmission slots in the WLAN, which meet the limitation of allocation patterns. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to define a particular allocation pattern equal to the length of the second predetermined time period of the (673 reference. One of ordinary skill in the art would have been motivated to do this in order to prevent any overlap between communications on the WLAN of the :928 reference and the wide area cellular network of the '673 reference.

Regarding claims 9 and 10, the $673 reference discloses that while a call on the wide area cellular network is ongoing, the terminal may continue to monitor the private radio network during idle frames of the wide area cellular network (col. 14, lines 51-59). lt is obvious that the amount of idle frames in a call over the cellular network is a variable parameter. The '673 reference does not expressly disclose allocation patterns with variable lengths. As described above, the '928 reference discloses allocation patterns comprised of TDD frames with two time slots each. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to vary the amount of TDD frames in an allocation pattern. One of ordinary skill in the art would have been motivated to do this in order to make use of all of the idle frames in the cellular communication for transmission or monitoring on the private radio network.

Regarding claim 11, the '673 reference discloses that the mobile terminal uses TDMA framing structures in the private radio network (col. 7, lines 65-67).

Regarding claim 12, the '928 reference discloses that all slave units are synchronized and listen on the same time slot (col. 12, lines 35-37).

Regarding claims l 3, the '928 reference discloses a time frame that has two time slots and wherein at most one packet is transmitted during each slot (col. 12, lines 50-55).

Regarding claims 14-16, the '928 reference discloses two time slots per frame, an even number. As described with respect to claim 1, it is obvious to transmit an integer number of packets during the time period between successive transmissions on the first network. Since the '928 reference discloses transmitting at most one packet per time slot, this corresponds to an integer number of time slots being transmitted during that period of time.

Regarding claim 21, the '928 reference does not expressly disclose a fixed length slot, but does disclose that the units must adhere to strict TDD timing in order to be synchronized (col. l2, lines 57-59). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use fixed length slots in the combination provide by Haartsen '673 in view of Haartsen '928. One of ordinary skill in the art would have been motivated to do this to make it easy to synchronize all of the slave units in a piconet.

Regarding claim 22, the '673 reference discloses using a frequency hopping scheme (col. 9, lines 63-64) and the transmit frequency hops with each successive time slot (col. 12, lines 56-57).

Regarding claim 23, the '673 reference discloses a synchronization circuit (67) for maintaining synchronization with both the wide area cellular network and private radio network (col. 1 1, lines 44-48).

Regarding claims 24 and 25, the '673 reference discloses that the wide area cellular network uses GSM, which is a TDMA technology (col. 8, lines 16-18). The '673 reference also discloses that the paging channel may be used for transmission once every two multiframes (col. 8, lines 30-38). Thus meeting the limitation of a period of time between transmissions equal to a TDMA frame.

Regarding claim 26, the '673 reference discloses a predetermined time duration during which the mobile terminal conducts activity over the wide area cellular network (col. 11, lines 26-30).

Allowable Subject Matter

7. Claims 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is an examiner's statement of reasons for the indication of allowable subject matter: The closest prior art of record fails to disclose or suggest the steps wherein the length of a slot is such that a second integer number of slots correspond to s second period of time, representing the period of time between successive transmission in a third mobile radio communications network, as specifically recited in claims.

9. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sharman (H1641) discloses a connection of mobile devices to heterogenous networks.

Haartsen (US#6,112,088) discloses a radio communications system and method for mobile assisted handover between a private network and a public mobile network.

Gilhousen et al. (US#5,697,055) discloses a method and apparatus for handoff between different cellular communications systems.

Mahany et al. (US#5,657,317) discloses a hierarchical communication system using premises, peripheral and vehicular local area networking.

Helmkamp et al. (US#5,265,150) discloses a automatically configuringwireless PBX system.

Mahany (US#5,960,344) discloses an local area network having multiple channel wireless access.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION THIS ACTION IS MADE FINAL**. See MPEP ' 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3988.
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Mphan

01/15/2005.

MANU. PHAN
PRIMARY EXAMINER